

# Pacific Packet Radio Society Newsletter

Volume 2 Number 6 June 1986

Pacific Packet Radio Society (PPRS)

Post Office Box 51562

Palo Alto, CA 94303

## Meeting Schedule

PPRS meetings are held the first Tuesday of each month at 7:30 PM at the Ampex Cafeteria, 411 Broadway, Redwood City. Next meeting is June 3rd. Newcomers and guests are always welcome.

### Tuesday, June 3rd Meeting - OSCAR Update

Ross Forbes, WB6GFJ, will be the guest speaker at the June PPRS meeting. Ross is an avid OSCAR satellite user and AMSAT area coordinator. He will discuss the present emergency status of OSCAR 10 and give us an update on the progress of Phase 3C. Ross will also explain the hardware modification and realignment necessary to make a TNC function on the upcoming JAS1 satellite which will have a store-and-forward digital transponder onboard. JAS1 handbooks (with modem schematic and instructions) will be on sale. Come to the meeting and learn more about the exciting combination of packet and satellite technology.

### Newsletter Proposal

Also... at the June meeting there will be a discussion/vote on a proposal to replace the *PPRS Newsletter* with *Packet Radio Magazine*. The *Packet Radio Magazine*, which was formerly the *FADCA Beacon*, is now national in scope. They are encouraging clubs to include a page or two of club news in each issue and to have it distributed instead of preparing a local newsletter. One of the major advantages of this scheme is that we would be able to receive a wider picture of packet operation in the U.S. It could also provide us with a national showcase for PPRS activities. Disadvantages include a reduction in monthly local content and potential loss of timeliness.

AJ6T>PPRS:

### President's Notes

Westnet continues to expand with new digipeater links extending from California to Arizona and Washington. Nevada, Utah and Oregon have been reachable for several months now. Here are some packets recently copied in San Jose:

```
fm N5EDH to BEACON via KR5S WB7BNI K7WS-1 AA6TN-1 W6AMT-3 W6AMT-2
W6AMT-1 W6AMT* ctl UI pid FO
Central Arizona Gateway/Mbx [7.093/145.01] in use.
fm WB7BNI to KE6BX via K7WS-1 AA6TN-1 W6AMT-3 W6AMT-2 W6AMT-1 W6AMT* ctl
100 pid FO
WB7BNI BBS - Phoenix, Az.
```

All of the long paths like these are very congested, so it's best to confine your packet dx'ing to slack times such as 3 AM.

As anyone who has tried to tune in HF packet on an SSB radio knows, getting the frequency just right can be an exercise in frustration. A solution is offered by N7CL and KV7B in *Gateway Newsletter* (vol.2, No. 18) [and the *PPRS Newsletter* (May, 1986)...ed.]. They suggest opening up the TAPR TNC1 and TNC2 300 baud modem bandwidth by reworking the removable header (U34 on TNC1, U19 on TNC2). Replace the 226k resistor with 180k, and replace the 510k with 750k. A different approach to that same HF tuning problem is revealed in another *Gateway* article in the same issue. KORZ reviews the new AEA model PM-1 HF packet modem. This device is a packet regenerator which is placed between the HF rig and the TNC. It features two channel filtering and AM demodulation with an LED bar graph as a tuning aid. KORZ says it works well on weak fading signals in the noise. Sounds very useful.

A final interesting tidbit from Gateway is the "MBX" feature on AEA's new PK-232 all-mode controller. "When the 'MBX [PBBS Callsign]' command is given, the system will display/print only the information packets decoded from that PBBS, in correct sequence, without repeats and without headers." What a great feature for reading the mail! It sure beats trying to reassemble the message in your head as the packets with headers go flying by on your screen. Here is a challenge to the PPRS membership: who can write an IBM PC



program which takes as its input an ASCII text file (as received by your favorite tnc and terminal program) and condenses from it a readable message without retries and headers? (PS: Don't forget to highlight any missed packets).

WB9LOZ>PPRS:

#### Digipeater/Mailbox Map Update

So that you can keep the digipeater/mailbox maps published in last month's PPRS Newsletter up to date, here is a listing of changes that have occurred since the maps were printed on 4/14/86:

145.01

ADD: KE6BX Hollister MAILBOX

Connect via W6AMT.

There is a new path into Arizona via K7WS-1 (Las Vegas):

K7WS-1--->WB7BNI--->KR5S--->N5EDH

||

---->KE7CZ

WB7BNI serves the Phoenix area, N5EDH is a mailbox/gateway in Camp Verde, and KE7CZ is a mailbox in Prescott.

145.03

ADD: N6DAM Oakland MAILBOX (5 pm to 1 am weekdays, 8 am to 1 am on weekends)

Connect via W6PW-1, WB6LPZ-1, WB6EVQ-1, WA6FSP-1 and N6DBT-2

ADD: WA6ZSN-2 Santa Suzanna Ridge near Ventura Connects to WA6ZSN-1

ADD: N6LUC-1 Camarillo MAILBOX Also connects to WA6ZSN-1

145.05

ADD: WA6YLB 26 miles east of Visalia 5700'

Connect via WB6AIE-1 and KB6C-1

145.07

Connect to WB6CFD-1 via N6IIU-1

145.09

ADD: KB6IRS-1 Soquel (near Santa Cruz) MAILBOX

Connect via N6MPW-1

ADD: KE6BX-1 Salinas runs 1 watt from 3500'

Connect via AA4RE-1

CHANGE: N6GGA-1 to N6MPW-1 (call change only--hardware remains the same)

DELETIONS: On 145.01 delete WA6RWN (off the air), WA6YLB (moved to .05) and WA6OSA-2 mailbox (off the air). There are no digipeaters or mailboxes in the San Joaquin Valley now on this frequency.

WB9LOZ>PPRS via W6CUS-1\*

#### Bay Area/Nevada Path

For those of you who haven't already found out from observing all the activity on .01, you can now reach Nevada using just one digipeater. W6AMT now connects to K7WS-3, located at 7000' near Goldfield, NV. The path is a bit shakey at times, but most of the time works quite well with very few retries. K7WS-3 connects to K7WS-2 with no trouble and to K7WS-1 and WA7HXO-3 sometimes. Happy DXing!

AI8A>PPRS:

#### Call for Articles/Speakers

Articles and news notes are *eagerly* solicited for inclusion in the PPRS Newsletter. Electronic/machine readable submissions are preferable, but all are welcomed. Articles may be sent to my mailbox on 145.07, to either W6CUS-1 or N6IIU-1, or via usenet ({hoptoad,111-crg!vecpyr}!atari!jw6).

Also, we still need volunteers interested in presenting a talk at upcoming PPRS meetings. If you have a subject you would like to discuss, or have suggestions for topics or speakers, please let me know.



RATS>PPRS via DRNET\*

**Wiring a Kenwood TH21/31/41 for Packet Operation  
with a TNC-2/200/2A**

DIN Connector	Mini-Plug	Sub-Mini-Plug
-----		
pin 1 (use center of shielded cable) (put 2.2 mf tant. in series)	middle sleeve	-----
pin 3 (same cable as above-use) (shield...)	big (top) sleeve (tip is unused)	-----
pin 4 (second piece of shield cable-use center)	-----	tip
pin 2 (big center lug-use shield from pin 4 cable)	-----	sleeve

The Radio Amateur Telecommunications Society is dedicated to building the Amateur Packet Network. We provide network facilities as part of the Eastnet system. Your support of our efforts is appreciated. Contact us for further information.

The Radio Amateur Telecommunications Society  
206 North Vivyan Street  
Bergenfield, NJ 07621

KB5MU>PPRS via DRNET\*

**San Diego Packet Radio Association**

The San Diego Packet Radio Association (SANDPAC) was formed on May 21, 1986. This organization formalizes the long-standing San Diego Packet Group. The purposes remain unchanged: To improve the state of the art, encourage and educate interested persons, and above all to promote and build the local and worldwide networks for digital communication via Amateur Radio.

The initial officers will serve until the end of the year:

President:	Paul Williamson, KB5MU
Executive Vice Pres:	Ken McGuire, WA2VFN
Technical Vice Pres:	Mike Brock, WB6HHV
Treasurer:	Bill Calderwood, K1CT
Secretary:	Bill Johnson, WD6FPY
Director at Large:	Barry Gershenfeld, WA2QMI
Director at Large:	Tom Lafleur, KA6IQA

Persons interested in joining SANDPAC should contact the secretary for information and a membership application.

W3IWI>PPRS via W3IWI,DRNET\*

**TNC Watchdog Timers**

I have had a receiver sitting on 14.103 for over an hour tonite copying solid continuous "fill" characters from some poor packeteer who has his keying line stuck down. This has also been observed on several occasions on our local Balto/Wash 2 meter LAN frequencies. In addition to being very hard on your radio (few radios are designed for continuous commercial service and tend to get quite warm after a few minutes of such service, and after an hour tend to develop a lot of "krispy kritturs" inside!) this is also very illegal.

I would advise all packeteers to check to make certain your watchdog timer is functioning. TNC2 owners should make certain that JMP4 is NOT!!! installed.

I offer even a stronger concern for users of Kantronics KPC TNC's which apparently do not have any fail-safe watch-dog timer included. I would advise all KPC users to build a watchdog and install it ASAP; operating without one is like playing Russian Roulette.

73, Tom



K0RZ>PPRS via K0HOA,N0CCZ,DRNET\*

**Review of the AEA HF Packet Modem Model PM-1**

**WILLIAM D. McCAA Jr., K0RZ**

**POST OFFICE BOX 3214**

**BOULDER, COLORADO 80307**

**April 21, 1986**

If you are like me, you have tried your TNC on HF 300 baud packet with limited success. I even tried using the recommended filter for 300 baud operation and found that the situation was improved but it still took a rock solid signal to be able to exchange packets.

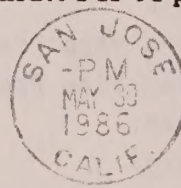
Advanced Electronic Applications "AEA" of Lynnwood, WA, has just introduced their model PM-1 Packet Modem. It is a modem that goes between the HF rig and any packet TNC and requires no modifications of the TNC. Basically it has two separate built in demodulators that each feature channel filtering and A.M. detection for maximum sensitivity and selectivity under noisy HF band conditions. The HF receiver tuning is assisted by a front panel bar graph. The PM-1 also has a built in Bell type 202 modem which allows for the direct connection to the audio input and output of the TNC. The HF transmit tones are generated by a built in AFSK generator which allow for the direct connection to the microphone jack of the HF SSB rig.

I was able to purchase a PM-1 locally, s/n 46, to try its operation on HF with my TAPR TNC-2. The installation was quite easy, just solder a few connectors to the cables provided and I was all set. I don't quite know how to put into words the surprise I experienced with the improvement, but the first BBS signal I found in 20 meters was WORLI. I connected to Hank's BBS and operated it just as easily as I operate the local BBS's on 2 meters. Needless to say I was more than pleased with its operation, for I have never been able to maintain a solid connect on HF with any station, let alone a BBS, without a lot of effort and retries. Now that I have had a few days of operation with the PM-1, I find I am able maintain packet connects with a minimum of retries with signals that are fading, weak, and noisy. The copyability is just as good as with the best of the RTTY Terminal units I have used. The PM-1 has opened a whole new world of pleasurable HF packet operation that I have never known before with just the PLL type TNC detection.

If you have or planning HF packet operation, I strongly recommend you look into the AEA PM-1 for use with your TNC.

P.S. I understand that the AEA HFM-64 modem made for the pakratt PK-64 performs equally as well.

**Pacific Packet Radio Society  
Post Office Box 51562  
Palo Alto, CA 94303 USA**



**First Class**

H.S. Magnuski 86  
2019 Barbara Drive  
Palo Alto, CA 94303